

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An exposure apparatus comprising:

a light source;

an optical integrator to which light is supplied from the light source; and

a two-dimensional spatial light modulator illuminated by light which has transmitted the optical integrator,

wherein the light source comprises an optical fiber bundle in which a plurality of optical fibers are arranged and light is emitted from the plurality of optical fibers, and

the configuration of a light-emitting area formed at an end portion of the optical fiber bundle is, as seen from the light-emitting side, substantially similar to the contour configuration of the light-emitting surface of the optical integrator,

wherein an etendue of the light source is smaller than that of the two-dimensional spatial light modulator.

2. (original): The exposure apparatus according to claim 1, wherein the optical integrator is a fly-eye type.

3. (original): The exposure apparatus according to claim 1, wherein the optical integrator is a rod type.

4. (original): The exposure apparatus according to claim 1, wherein the two-dimensional spatial light modulator is a digital micromirror device.

5. (original): The exposure apparatus according to claim 1, wherein the two-dimensional spatial light modulator is disposed in a tilted manner so that a predetermined angle is formed by a direction of a side of the two-dimensional spatial light modulator and a main scanning direction for exposure.

6. (original): The exposure apparatus according to claim 5, wherein the predetermined angle is in the range of 0.1° to 1° .

7. (original): The exposure apparatus according to claim 1, wherein a diameter of at least one of a core and a clad of each of the plurality of optical fibers is changed depending on the number of the plurality of optical fibers.

8. (currently amended): An exposure apparatus comprising:

- a light source device;
- an optical integrator to which light is supplied from the light source device; and
- a two-dimensional spatial light modulator illuminated by light which has transmitted the optical integrator,

wherein the light source device comprises a light source portion and an optical fiber bundle in which a plurality of optical fibers coupled to the light source portion are arranged and light is emitted from the plurality of optical fibers, and

the configuration of a light-emitting area formed at an end portion of the optical fiber bundle is, as seen from the light-emitting side, substantially similar to the contour configuration of the light-emitting surface of the optical integrator,

wherein an etendue of the light source is smaller than that of the two-dimensional spatial light modulator.

9. (original): The exposure apparatus according to claim 8, wherein the optical integrator is a fly-eye type.

10. (original): The exposure apparatus according to claim 8, wherein the optical integrator is a rod type.

11. (original): The exposure apparatus according to claim 8, wherein the light source portion comprises a laser diode.

12. (original): The exposure apparatus according to claim 8, wherein the light source portion comprises a plurality of laser diodes, and each of the plurality of optical fibers is coupled to the plurality of laser diodes.

13. (original): The exposure apparatus according to claim 8, wherein the light source portion comprises a broad area type laser diode array including a plurality of emitters.

14. (original): The exposure apparatus according to claim 8, wherein the two-dimensional spatial light modulator is a digital micromirror device.

15. (original): The exposure apparatus according to claim 8, wherein the two-dimensional spatial light modulator is disposed in a tilted manner so that a predetermined angle is formed by a direction of a side of the two-dimensional spatial light modulator and a main scanning direction for exposure.

16. (original): The exposure apparatus according to claim 15, wherein the predetermined angle is in the range of 0.1° to 1° .

17. (original): The exposure apparatus according to claim 8, wherein a diameter of at least one of a core and a clad of each of the plurality of optical fibers is changed depending on the number of the plurality of optical fibers.

18. (currently amended): An exposure apparatus comprising a plurality of exposure heads,

wherein each of the plurality of exposure heads comprises a light source, an optical integrator to which light is supplied from the light source, and a two-dimensional spatial light modulator illuminated by light which has transmitted the optical integrator,

the light source comprises an optical fiber bundle in which a plurality of optical fibers are arranged and light is emitted from the plurality of optical fibers, and

the configuration of light-exiting area formed at an end portion of the optical fiber bundle is, as seen from the light-exiting side, substantially similar to the contour configuration of the light-emitting surface of the optical integrator,

wherein an etendue of the light source is smaller than that of the two-dimensional spatial light modulator.

19. (original): The exposure apparatus according to claim 18, wherein the plurality of exposure heads are arranged in a substantial matrix in which a plurality of exposure head rows, in each of which the exposure heads are arranged in a line along the main scanning direction for exposure, are arranged along a sub scanning direction for exposure, and the exposure heads in the respective rows are arranged so as to be shifted by a predetermined interval.

20 (previously presented): The exposure apparatus according to claim 1 wherein an etendue level of the light source is less than $80 \text{ mm}^2 \cdot \text{str}$.

21 (previously presented): The exposure apparatus according to claim 1, wherein the light source comprises a non-uniform light distribution intensity light source.

22. (cancelled):

23 (new). The apparatus of claim 1 wherein the light source comprises plural laser sources inputting light to a common fiber.

24 (new). The apparatus of claim 5, wherein the predetermined angle comprises a non-zero angle and a non-right angle.

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25 (new). The apparatus of claim 6, wherein the predetermined angle represents a rotation about an optical axis, said optical axis being normal to a surface of the spatial light modulator and said predetermined angle is defined relative to the main scanning direction.